

## CLIMATOLOGICAL DATA FOR AUGUST, 1913.

## DISTRICT NO. 12, COLUMBIA VALLEY.

EDWARD A. BEALS, District Editor.

The month on the whole was favorable for the ripening of grain, fruit and hops, and for harvest work in general. In only a few places was there a shortage of water for irrigation purposes. Local storms did some damage by washing roads and, where accompanied by hail, crops were destroyed. These disturbances were not nearly so numerous as in August a year ago and traffic interruptions were of short duration. In the higher sections frost formed on several mornings and garden truck was harmed, but staple crops suffered no injury from freezing weather. There were few forest fires and those that did occur were mostly brush that were easily controlled by the forest officials.

## TEMPERATURE.

While the mean temperature of the district was nearly 3° above normal, there was a wide range in temperature in the sections remote from the coast region. Freezing weather occurred in the higher altitudes about the 15th and temperatures of 100° and above were recorded on the lower levels on the first and last of the month.

The mean temperature, as determined from the records of 285 stations, was 66.7°, which is 1.6° above normal. The highest temperature, 110°, was recorded on the 1st, at Hanford, Wash., at an elevation of 385 feet, and the lowest temperature, 20°, occurred on the 18th at Cliff and Imperial, contiguous stations in central Oregon, above 4,000 feet elevation, and at Pleasant Valley, Mont., on the 21st, at an altitude of 3,500 feet. The greatest daily range in temperature, 66°, was at Pleasant Valley, Mont., Colfax, Wash., and La Pine and Range, Oreg., at elevations ranging from 2,300 to 4,230 feet. The highest monthly mean, 78.9°, was recorded at Six Prong, Wash., and the lowest monthly mean, 55.2°, at Pierson, Idaho, the latter at an elevation of 7,000 feet.

The following table shows for comparative purposes the mean temperature and departure from normal for the States of Oregon, Washington, and Idaho, and those portions of Montana and Wyoming in District No. 12 for the month of August during the last five years:

Years.	Oregon.		Washington.		Idaho.		Montana.		Wyoming.	
	Mean.	De-par-ture.	Mean.	De-par-ture.	Mean.	De-par-ture.	Mean.	De-par-ture.	Mean.	De-par-ture.
	64.5	-1.2	64.2	-2.1	67.2	+0.1	62.2	0	59.8	+1.1
1910	62.7	-2.7	62.5	-3.1	64.4	-2.6	58.9	-2.0	56.1	-1.6
1911	64.9	-0.6	64.9	-1.1	64.4	-2.8	59.7	-2.1	56.0	-1.6
1912	63.8	-1.8	63.4	-2.2	63.3	-3.8	59.9	-2.0	54.6	-3.1
1913	66.3	+1.5	66.9	+1.7	68.2	+1.4	63.9	+1.9	58.7	+0.8

## PRECIPITATION.

The precipitation was mostly in the form of local showers, with no well defined wet or dry periods. The rainfall was below normal in Washington, Idaho, and

Wyoming, and above normal in Oregon and western Montana.

The average precipitation for the district, as computed from the records of 393 stations, was 0.56 of an inch, which was 0.06 below normal. The greatest 24-hour rainfall, 1.68 inches, occurred at Granite Falls, Wash., on the 17th, at an elevation of 397 feet. The greatest monthly amount, 2.74 inches, was recorded at Goat Lake, Wash., at an altitude of 2,900 feet. No rain fell at several stations in Idaho, Washington, and Oregon.

The average monthly precipitation with departure from normal for the month of August during the last five years is shown in the following table for the States of Oregon, Washington, and Idaho, and for those portions of Montana and Wyoming in District No. 12:

Years.	Oregon.		Washington.		Idaho.		Montana.		Wyoming.	
	Mean.	Depart- ture.	Mean.	Depart- ture.	Mean.	Depart- ture.	Mean.	Depart- ture.	Mean.	Depart- ture.
1909	0.12	-0.40	0.37	-0.24	0.56	-0.02	0.43	-0.75	1.48	-0.16
1910	0.08	-0.49	0.36	-0.39	0.09	-0.44	0.68	+0.02	0.32	-0.85
1911	0.14	-0.41	0.64	-0.09	0.24	-0.34	1.56	+0.05	0.25	-1.27
1912	2.04	-1.75	2.84	-2.18	1.29	+1.01	1.89	+0.99	2.75	+0.74
1913	0.51	+0.06	0.63	-0.14	0.46	-0.18	1.05	+0.02	0.79	-0.61

## THE RIVERS.

There was the usual subsidence of waters in nearly all the rivers of the district, so that the highest stages were recorded early in the month and the lowest at or near the close. Nearly all the streams were slightly above the normal stages for August. The following table gives the extreme, mean, and normal stages for the month at all stations in the district from which reports were received:

Stations.	River.	High-est.	Date.	Low-est.	Date.	Mean.	Normal.
Albany	Willamette	2.0	1st*	1.3	26th*	1.6	1.1
Salem	do	0.9	1st*	-0.1	28th	0.3	0.3
Wilsonville	do	3.5	11th	1.5	28th*	2.2	2.0
Oregon City	do	3.2	4th	0.7	29th	1.8	1.8
Portland	do	9.7	1st	4.9	27th*	7.0	6.6
Jefferson	Santiam	1.3	1st*	0.9	27th*	1.1	0.9
McMinnville	Yamhill	0.3	1st*	-0.4	30th*	-0.1	0.3
Cazadero	Clackamas	1.5	1st*	1.2	20th*	1.3	-----
Kamiah	Clearwater	4.3	1st	3.0	29th	3.7	-----
Weiser	Snake	5.6	2d	1.8	21st*	2.7	2.1
Lewiston	do	4.3	3d	0.8	31st	2.0	1.4
Riparia	do	4.6	3d*	1.8	30th*	2.9	2.0
Bonners Ferry	Kootenai	10.2	1st	5.7	31st	7.9	7.2
Newport	Pend d'Oreille	6.7	1st	2.0	31st	3.8	3.0
Northport	Columbia	12.9	1st	5.0	29th*	8.8	17.5
Wenatchee	do	23.7	1st	-----	-----	-----	-----
Umatilla	do	11.3	1st	6.4	31st	8.9	8.6
The Dalles	do	17.1	1st	9.2	31st	13.0	12.9
Cascade Locks	do	12.8	1st	6.5	30th*	9.7	9.6
Vancouver	do	9.9	1st	4.9	25th	7.0	6.9

NOTE.—The asterisk indicates that the stage was observed on more than one date.

## MISCELLANEOUS PHENOMENA.

The prevailing winds were mostly from a westerly direction with no maximum velocities exceeding 45 miles an hour.

Frosts formed on several mornings in the second and third decades and caused some injury to potatoes and tender garden truck in Oregon, but in other sections they were not materially damaging.

Thunderstorms, some of which were quite severe, occurred frequently in the eastern portion of the district; in fact they were of almost daily occurrence in Oregon

and Idaho. In many instances these storms were accompanied by hail which caused considerable damage. The cooperative observer at Pomeroy, Wash., reported that "There were severe hailstorms on the 3d and 4th; 900 acres of grain in the fields were ruined; water spouts did much damage to roads and crops; the total damage being \$75,000." The observer at Riverside, Oreg., stated that on the 10th the hailstones were as large as hens' eggs, which, with a cloudburst, ruined gardens in that vicinity.

Solar halos were observed at Baker, Oreg., on several dates.

TABLE 1.—Climatological data for August, 1913. District No. 12, Columbia Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.							Sky.	Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
<i>Montana.</i>																					
Anaconda.	Deer Lodge.	5,330	11	63.2	+ 2.0	89	25†	33	15	44	0.76	- 0.19	0.38	0	7	15	11	5	nw.	C. D. Desmond.	
Butte.	Silver Bow.	5,716	18	64.9	+ 2.3	91	25	35	15	40	1.09	+ 0.13	0.60	0	4	15	12	4	nw.	J. R. Wharton.	
Columbia Falls.	Flathead.	3,100	17	64.1	+ 1.9	96	23	31	19	50	1.65	+ 0.26	0.45	0	9	17	6	8	sw.	J. M. Grist.	
Como.	Ravalli.	3,750	4	67.2	.....	95	23	40	15	40	0.30	.....	0.15	0	3	16	9	6	.....	Hiram Platt.	
Dayton.	Flathead.	2,925	8	64.6	.....	92	23	38	19	44	1.20	- 0.05	0.50	0	6	20	4	7	.....	A. J. Ruechell.	
Deer Lodge.	Powell.	4,509	1	7	64.6	.....	89	28	37	15	39	0.73	.....	0.31	0	5	21	9	1	.....	H. B. Grant.
East Anaconda.	Deer Lodge.	5,500	7	60.9	.....	92	23	28	18	58	0.59	.....	0.63	0	10	14	10	7	w.	Mike Petery.	
Fortine.	Lincoln.	2,975	7	60.9	.....	90	3†	40	19	40	0.61	- 0.20	0.15	0	9	17	7	7	n.	Hamilton Chamber of Com.	
Hamilton.	Ravalli.	3,524	10	66.2	+ 1.3	90	3†	40	19	40	1.79	.....	0.74	0	6	22	2	2	sw.	M. K. Landreth.	
Hat Creek.	Powell.	6,000	3	7	64.6	.....	92	23	38	19	44	0.61	.....	0.61	0	5	12	17	2	sw.	U. S. Forest Service.
Haugan.	Missoula.	3,150	1	60.9	.....	95	27	28	19	60	1.06	.....	0.31	0	8	14 <sup>a</sup>	13 <sup>a</sup>	3 <sup>a</sup>	w.	E. Knott.	
Heron.	Sanders.	2,261	1	63.2	.....	95	23	34	19	49	0.88	.....	0.23	0	9	14	15	2	nw.	U. S. Weather Bureau.	
Kalispell.	Flathead.	2,965	14	63.3	+ 0.4	90	23	36	19	40	0.81	- 0.28	0.46	0	10	16	5	10	sw.	U. S. Forest Service.	
Libby.	Lincoln.	2,075	3	64.2	+ 1.3	97	4	32	19†	58	0.91	- 0.06	0.66	0	7	17	5	9	sw.	U. S. Weather Bureau.	
Missoula.	Missoula.	3,228	34	66.8	+ 3.7	96	3†	36	15	52	1.52	+ 0.68	0.50	0	7	20	11	0	w.	S. B. Muchmore.	
Ovando.	Powell.	4,050	13	60.7	+ 2.6	93	24	28	15†	57	1.12	- 0.01	0.27	0	5	21	4 <sup>c</sup>	3 <sup>c</sup>	sw.	G. T. Bramble.	
Philipsburg.	Granite.	5,273	9	64.2	.....	95	22†	30 <sup>b</sup>	15 <sup>b</sup>	55 <sup>b</sup>	0.48	.....	0.25	0	8	14	17	0	w.	James M. Self.	
Plains.	Sanders.	2,473	14	65.4	+ 1.6	93	1†	37 <sup>b</sup>	15 <sup>b</sup>	61 <sup>b</sup>	0.95	- 0.06	0.23	0	8	13	2	16	w.	A. D. Stillman.	
Pleasant Valley.	Flathead.	3,500	5	58.8	.....	92	23	20	21	68	0.98	.....	0.42	0	3	20	7	4	sw.	F. P. Brown.	
Polson.	do.	2,920	5	68.0	.....	97	23	40	19	41	0.99	.....	1.18	0	6	17	14	2	s.	Martin S. Pixley.	
Saint Ignatius.	Missoula.	2,911	7	65.1	.....	93	23	34	19	46	1.76	.....	0.64	0	9	24	5	2	sw.	University Orchard Co.	
Saltese.	do.	3,600	8	64.4	.....	93	3	36	15†	44	1.15	.....	0.43	0	4	26	3	2	w.	U. S. Forest Service.	
Stevensville.	Ravalli.	3,500	1	64.4	.....	93	3	36	15†	44	1.25	.....	0.60	0	4	14	14	3	sw.	James Hylent.	
Thompson Falls.	Sanders.	2,424	1	63.6	.....	94	23†	32	19	53	1.25	.....	0.35	0	8	19	11	1	nw.	R. W. Fisher.	
Trot Creek.	do.	2,375	1	65.6	.....	94	3†	37	14	40	1.04	.....	0.00	0	20	11	0	ne.	G. E. Luce.		
Victor.	Ravalli.	3,537	2	65.6	.....	94	3†	37	14	40	1.04	.....	0.00	0	20	11	0	ne.			
Willow Glen Stock Farm.	Deer Lodge.	5,064	2	62.0	.....	88	24†	30	17	55	1.04	.....	0.00	0	20	11	0	ne.			
<i>Wyoming.</i>																					
Afton.	Lincoln.	6,200	9	60.8	.....	91	25	32	10	54	0.82	.....	0.40	0	3	28	2	1	sw.	A. V. Call.	
Alta.	do.	6,500	3	53.6	.....	88	25	32	10	51	0.45	.....	0.29	0	3	13	16	2	w.	Mrs. Lucy Brown.	
Bechler River.	Yellowstone Park.	6,500	1	59.4	+ 0.8	85	25	31	15	50	0.74	- 0.61	0.40	0	3	27	3	1	w.	U. S. Army.	
Bedford.	Lincoln.	5,900	13	59.4	+ 0.8	85	25	31	15	50	0.74	- 0.61	0.40	0	7	11	15	2	sw.	C. G. Heiner.	
Moran.	do.	6,770	1	57.5	.....	82	25	32	10	47	0.82	.....	0.31	0	5	25	4	2	w.	U. S. Reclamation Service.	
Snake River.	Yellowstone Park.	7,000	7	56.0	.....	84	25	29	15†	50	1.16	.....	0.52	0	5	25	4	2	w.	U. S. Army.	
<i>Nevada.</i>																					
San Jacinto.	Elko.	8	64.6 <sup>b</sup>	.....	92	22†	30 <sup>b</sup>	14	56 <sup>b</sup>	0.85	.....	0.38	0	6	.....	.....	.....	.....		F. W. Marchant.	
<i>Utah.</i>																					
Standrod.	Boxelder.	69.0	.....	92	22	40	15	43	0.73	.....	0.39	0	3	24	7	0	sw.	T. B. Jones.			
<i>Idaho.</i>																					
Albion.	Cassia.	4,650	10	60.9	- 0.2	95	26	32	19	57	0.05	- 0.35	0.05	0	1	18	13	0	w.	C. E. Bocock.	
Almo.	do.	3	.....	95	26	32	10	51	0.45	1.40	0.70	0	3	26	2	3	ne.	Wm. D. Cahoon.			
Arrowrock.	Power.	4,341	21	72.6	1	101	28	42	10 <sup>b</sup>	50	1.28	+ 0.74	0.88	0	2	26	5	0	ne.	Geo. Stoll.	
Blackfoot.	Bolse.	3,100	1	67.4	+ 1.1	96	25	39	15	54	0.29	.....	0.29	0	1	28	3	0	w.	U. S. Reclamation Service.	
Blackfoot Dam.	Bingham.	4,503	17	67.4	.....	98	27	33	15	51	0.10	- 0.59	0.04	0	4	20	11	0	sw.	E. A. Dowd.	
Bogus Creek.	Bannock.	6,200	3	63.4	.....	98	27	33	15	51	0.95	.....	0.30	0	5	20	7	4	s.	S. C. Waddell.	
Boise.	Ada.	4,200	4	73.2	+ 1.4	98	28	46	19	43	0.03	- 0.13	0.03	0	1	19	10	2	w.	F. P. Ingraham.	
Boise King.	Elmore.	2,739	27	65.7	.....	93	21†	34	19	52	0.42	.....	0.36	0	3	20	10	1	sw.	U. S. Weather Bureau.	
Bonners Ferry.	Bonner.	1,850	6	63.2	.....	94	1†	35	18	50	1.09	.....	0.53	0	5	25	5	0	w.	A. W. Stevens.	
Boulder Mine.	Boise.	4,800	3	71.6	.....	96	25	46	15	39	0.10	.....	0.04	0	3	31	0	0	sw.	W. H. Heideman.	
Buhl.	Twin Falls.	2,800	6	71.6	.....	96	25	46	15	39	0.13	.....	0.10	0	2	22	9	0	sw.	Patrick Moriarty.	
Caldwell Experiment Station.	Canyon.	2,372	8	71.0	.....	98	16†	37	19	50	0.44	.....	0.44	0	1	10	20	1	w.	S. C. Orr.	
Cambridge.	do.	1	70.8	.....	98	24	35	19	52	0.12	.....	0.06	0	3	20	1	1	w.	Wm. J. Boone.		
Cedar Creek Dam.	Washington.	2,651	17	72.1	+ 1.7	103	21	35	19	58	0.07	- 0.32	0.05	0	2	22	6	3	w.	C. B. Hampson.	
Twin Falls.	do.	5,220	2	72.1	.....	98	21	35	19	58	0.07	.....	0.05	0	2	22	6	3	w.	Chas. H. Shepherd.	
Chesterfield.	Bannock.	5,424	16	61.4	+ 1.3	94	22	29	16	59	1.29	+ 0.14	1.01	0	3	23	6	2	w.	Robert Hoffman.	
Clarks Fork.	do.	2,084	1	63.5 <sup>a</sup>	.....	91 <sup>a</sup>	23	39 <sup>a</sup>	16 <sup>a</sup>	56	0.74	.....	0.24	0	8	20	8	3	sw.	Chas. S. West.	
Lyde.	Custer.	6,000	1	70.1 <sup>b</sup>	+ 3.1	96 <sup>b</sup>	1	42 <sup>b</sup>	19	46 <sup>b</sup>	0.40	.....	0.13	0	5	11	20	0	w.	Wm. Potter.	
Coeur d'Alene.	Kootenai.	2,157	18	70.1 <sup>b</sup>	+ 3.1	96 <sup>b</sup>	1	47 <sup>b</sup>	19	46 <sup>b</sup>	0.40	.....	0.13	0	5	11	20	0	sw.	R. L. Sutcliffe.	
Council.	Adams.	3,059	1	67.4	.....	97 <sup>b</sup>	21	42 <sup>b</sup>	19	46 <sup>b</sup>	0.40	.....	0.13	0	5	11	20	0	w.	J. H. O'Rourke.	
Glendive.	do.	1,520	4	70.8	.....	109	1	40	15†	56	1.39	.....	0.50	0	5	11	20	0	sw.	F. L. Featherston.	
Deary.	Latah.	2,854	1	67.4	.....	98	25	37	19	50	0.13	.....	0.08	0	1	23	8	0	w.	Mrs. B. Caldwell.	
Dent.	Clearwater.	1,330	7	60.4	.....	86	25	34	10†	45	0.35	.....	0.25	0	2	13	9	9	s.	W. J. Davis.	
Driggs.	Fremont.	6,097	6	60.4	.....	86	25	34	10†	45	0.35	.....	0.00	0	0	21	9	1	w.	Emil Schuessler.	
Emmett.	do.	2,350	6	74.6	.....	100	24†	44	19	46	0.00	.....	0.00	0	0	6	21	9	1	w.	W. H. Durrant.
Farnet.	Owyhee.	2,300	3	72.1	.....	102	27	39	24	54	0.05	.....	0.05	0	1	24	7	0	sw.	U. S. Forest Service.	
Genesee.	Elmore.	2,575	13	77.3	+ 0.7	104	24	46	19	49	0.00	- 0.07	0.00	0	0	25	6	0	e.	M. B. Merritt.	
Glenns Ferry.	Bear Lake.	6,171	4	75.6	.....	103	28	42	19	52	0.35	.....	0.24	0	3	24	8	0	sw.	A. A. Kenison.	
Gooding.	Elmore.	2,569	4	75.6	.....	105	24†	38	19	60	0.02	.....	0.02	0	1	23	8	0	w.	F. W. Boehme.	
Grace.	do.	3,572	3	70.6	.....	99	22	37	19	54	0.08	.....	0.08	0	1	29	2	0	sw.	I. E. Perkins.	
Grand Forks.	Bannock.	5,400	6	69.2	.....	102	22	40	15†	54	0.32	.....	0.17	0	3	18	5	8	w.	J. S. Welch.	
Grandview.	Shoshone.	3,000	3	59.2	.....	93	28	24	18	60	0.18	.....	0.08	0	4	18	0	13	w.	E. W. Joy.	
Imperial Pass.	Owyhee.	2,300	3	72.1	.....	102	27	39	24	54	0.05	.....	0.05	0	1	24	7	0	sw.	Claget Sanders.	
Juliette.	Boise.	5,200	3	72.1	.....	103	28	42	19	58	0.16	.....	0.05	0	6	24	8	0	w.	H. E. Hanna.	
Malheur.	Owyhee.	2,381	4	75.8																	

TABLE 1.—Climatological data for August, 1913. District No. 12, Columbia Valley—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>Idaho—Continued.</i>																				
Kirkham.	Boise.	4,200	3								0.30	0.30	0	1	16	15	0		Mrs. Josie B. West.	
Kooskia.	Idaho.	1,261	4	72.4		103	3	41	21	56	1.35	0.70	0	3	10	11	10	sw.	U. S. Forest Service.	
Lakeview.	Bonner.	2,250	15	64.9	+ 1.5	91	23	45	11	37	0.56	0.16	0	8	18	13	0	se.	E. D. Faust.	
Landore.	Adams.	5,300	8	61.2		88	21	33	15	46	0.60	0.24	0	7	27	0	4	nw.	Mrs. Emma L. Brown.	
Leodore.	Lemhi.	1	61.4			103	26	30	1	63	0.67	0.20	0	5	13	11	7	e.	Tom Keating.	
Lewiston.	Nor'Fonce.	757	19	74.2	+ 0.7	103	23	48	15	46	0.47	+ 0.10	0.40	0	2	22	2	w.	U. S. Weather Bureau.	
Little Camas.	Elmore.	5,000	3								0.28	0.10	0	3	9	3	19	sw.	Solon McCoy.	
Loon Creek.	Custer.	8,000	3	58.6		90	24	28	19	55	0.64	0.25	0	4	24	7	0	nw.	Mrs. Mary Williams.	
Mackay.	do.	5,897	5	64.1		91	26	36	3	44	0.77	0.38	0	8	17	12	2	sw.	U. S. Forest Service.	
Malad.	Oneida.	4,700				101	22	40	10	51	1.89	1.18	0	0	20	10	1	se.	Uther Jones.	
Meridian.	Ada.	2,657	2	71.9		100	24	39	19	48	T.	T.	0	0	0	0	0	nw.	A. W. Garrett.	
Mesa.	Adams.	3,275	2	72.8		98	21	46	19	41	0.15	0.15	0	1	13	0	18	n.	I. S. Carter.	
Middle Fork.	Idaho.	1,397	2															s.	Jos. McGhee.	
Miner.	Twin Falls.	4,110	9	70.2	+ 0.5	97	25	40	7	50	0.14	- 0.02	0.14	0	1	23	8	w.	James K. Young.	
Moore.	Blaine.	5,700	12	66.3	+ 2.7	92	22	38	10	42	0.28	- 0.12	0.15	0	4	19	12	0	sw.	Chas. B. Lemon.
Moscow.	Latah.	2,748	20	66.8	+ 1.5	93	4	25	15	38	0.63	0.00	0.20	0	6	18	6	7	se.	University of Idaho.
Mountainhome.	Elmore.	3,150	7	70.6		100	24	33	19	59	0.31	0.22	0	2	19	9	3	nw.	Mrs. Elley Manion.	
Murtaugh.	Twin Falls.	6	68.2			92	25	41	19	44	T.	T.	0	0	24	7	0	w.	J. E. Steinour.	
New Meadows.	Adams.	3,950	8	61.4		95	23	24	19	65	0.57	0.42	0	3	13	18	1	s.	Lee Highley.	
Nerperce.	Lewis.	3,082	3	61.0		92	3	30	15	47	0.72	0.19	0	6	17	13	1	sw.	P. Mitchell.	
Oak ey.	Cassia.	4,700	19	70.6	+ 1.3	107	22	45	97	52	0.54	+ 0.25	0.45	0	3	13	18	0	sw.	John Adams.
O'Hare Bar.	Idaho.	1,557	2	67.8		94	25	40	19	42	1.25	0.70	0	0	0	0	0	sw.	J. D. Agnew.	
Orofino.	Clearwater.	1,027	8	69.2		102	3	40	19	50	1.87	0.87	0	6	17	14	0	sw.	Geo. Alteneder.	
Paris.	Bear Lake.	5,946	18															n.	John Norton.	
Payette.	Canyon.	2,159	21	72.4	+ 0.2	102	24	37	19	55	0.04	- 0.16	0.04	0	1	18	8	5	sw.	E. F. Allen.
Pierson.	Custer.	7,000	4	55.2		87	25	22	20	50	0.68	0.60	0	3	25	6	0	s.	D. P. Clarke.	
Pleasant Valley.	Ada.	3,000	5	71.2		100	28	36	19	54	0.03	0.03	0	1	30	0	1	nw.	C. E. Friedrich.	
Pocatello.	Bannock.	4,483	13	71.2	+ 0.7	94	22	45	15	43	0.36	- 0.20	0.15	0	6	13	15	3	se.	U. S. Weather Bureau.
Pocatello Nursery.	do.	5,396	6	93.1		93	25	37	19	54	0.38	0.35	0	2	27	4	0	sw.	Mrs. Fannie E. Say.	
Poplar.	Bonneville.	5,500	3	65.4		92	25	36	15	41	0.27	0.09	0	5	23	8	0	sw.	C. M. Lawrence.	
Porthill.	Bonner.	1,665	23	63.8	+ 0.3	90	23	38	16	39	0.79	- 0.20	0.29	0	6	22	5	4	sw.	H. A. French.
Priest River Experimentation Station:																				
No. 1.	do.	2,500	1	61.8		86	1	38	16	35	0.73		0.35	0	9	17	10	4	sw.	D. R. Brewster.
No. 2.	do.	2,500	1	64.8		94	1	35	16	47	0.59		0.28	0	9	17	10	4	sw.	Do.
No. 3.	do.			61.0		92	1	29	16	55	0.69		0.34	0	9	17	10	4	s.	P. V. Smith.
Pyle Creek.	Boise.	3,100	3	69.4		97	25	37	19	54	0.38		0.16	0	1	23	8	0	nw.	Idaho Irrigation Co.
Ridgfield.	Lincoln.	4,306	3	69.1		94	25	38	15	51	1.17		0.38	0	1	23	8	0	sw.	J. S. Bussell.
Rogerson.	Roseberry.	4,872	3															sw.	Rev. T. P. Graham.	
Roseworth.	Twin Falls.	4,650	2															nw.	D. B. Hartwell.	
Rupert.	Minidoka.	4,204	6	69.4		97	25	40	19	49	0.16		0.12	0	2	1	30	0	sw.	Will Parry.
St. Anthony.	Fremont.	4,968																s.	Heber C. Sharp.	
St. Maries.	Kootenai.	2,263	15															sw.	J. S. Turnbull.	
St. Michael's Priory.	Idaho.	3,811	66.4			89	23	42	14	29	1.18		0.47	0	7	15	11	5	w.	Rev. Fr. Berthold, O. S. B.
Salmon.	Lemhi.	4,040	7	67.0		96	23	37	10	54	0.72		0.40	0	5	20	11	0	w.	E. K. Abbott.
Sandpoint.	Bonner.	2,086	2															s.	S. M. Moore.	
Sheep Hill.	Boise.	5,000	3															sw.	C. M. Gardner.	
Shoshone.	Lincoln.	3,968	5	72.3		99	22	46	15	44	0.05		0.05	0	1	14	17	0	w.	Zell Truman.
Silver City.	Owyhee.	6,280	5															sw.	Russell Stoddard.	
Soldier Creek.	Blaine.	5,755	2	63.8b		88	22	35	15	42b	0.39		0.30	0	3	17	11	3	sw.	J. E. Minear.
Spirit Lake.	Kootenai.	2,560	2															s.	M. C. Krause.	
Springfield.	Bingham.	4,420	4	70.2		100	22	38	10	57	0.19		0.17	0	2	13	17	1	sw.	Mrs. W. A. Edwards.
Spring Hill.	Ada.	3,607	73.4			97	28	47	19	40	0.13		0.13	0	1	21	10	0	nw.	Ray G. Lyons.
Sugar.	Fremont.	4,892	5															sw.	Utah-Idaho Sugar Co.	
Sunnyaside.	Elmore.	3,500	3															nw.	Col. M. W. Wood.	
Tripod Mountain.	Boise.	4,300	3															sw.	Mrs. Verna Paddock.	
Twin Falls.	Twin Falls.	3,825	7	70.8		99	25	38	15	55	0.17		0.08	0	3	14	17	0	sw.	J. A. Waters.
Vernon.	Fremont.	5,050	14	64.1	+ 0.8	92	22	35	15	46	0.09	- 0.47	0.05	0	2	15	16	0	sw.	A. M. Slattery.
Wallace.	Shoshone.	2,728	5	63.8	+ 3.2	87	1	45	19	33	1.72	+ 0.50	0.42	0	6	2	10	12	w.	U. S. Weather Bureau.
Weiser.	Washington.	2,114	1	75.8		106	24	42	19	53	0.54		0.45	0	3	10	12	9	sw.	J. W. Lapish.
Wendell.	Gooding.	3,400	4	72.0		99	25	41	19	49	0.05		0.03	0	2	28	3	1	w.	C. L. Dingler.
Weston.	Franklin.	4,460	14	70.8	+ 4.0	99	22	40	17	52	0.23	- 0.83	0.11	0	3	23	7	1	s.	Wm. T. Chatterton.
<i>Washington.</i>																				
Aberdeen.	Chehalis.	162	22	63.6	+ 3.0	92	21	44	16	47	1.08	- 0.10	0.71	0	8	10	18	3	nw.	H. A. Benham.
Anacortes.	Skagit.	60	19	56.8		83	1	33	13	44	1.44	+ 0.47	1.00	0	4	23	5	3	sw.	Douglas Almond.
Anatone.	Aston.	2,800	6	61.4		92	23	31	15	58	0.77		0.55	0	2	18	13	1	sw.	W. A. Hamilton.
Baker.	Skagit.	390	7	65.4		96	1	45	16	48	2.00		0.80	0	8	9	13	10	sw.	R. M. White.
Bellingham.	Whatcom.	60	18	63.8	+ 3.2	87	1	45	19	33	1.72	+ 0.50	0.98	0	5	19	7	5	sw.	Sanford B. Mayhew.
Bellingham, near.	do.	107	2	62.2		85	1	42	19	37	1.55		0.68	0	6	15	10	6	sw.	U. S. Bureau of Plant Ind.
Blaine.	do.	57	16	61.4	+ 1.8	84	1	41	20	33	0.91	- 0.32	0.50	0	6	15	5	11	nw.	John Burmeister.
Blewett.	Chelan.	2,200	4															s.	U. S. Navy Yard.	
Bremerton.	Kitsap.	40	15															sw.	Geo. C. Sears.	
Brewster.	Okanogan.	1,620	3	72.6		101														

TABLE 1.—Climatological data for August, 1913. District No. 12, Columbia Valley—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<b>Washington—Contd.</b>																				
Dryden.	Chelan.	960	3								T.		T.	0	0	30	1	0	nw.	Wenatchee Vy. G. & El. Co.
Duckabush.	Jefferson.	380																	E. G. Newman.	
Ellensburg.	Kittitas.	1,571	25	65.3	-0.1	100	1	36	21	52	0.13	-0.07	0.07	0	2	23	5	3	nw.	R. Lee Barnes.
Eltopia.	Franklin.	508				108	4				0.03		0.03	0	1				Frank O. Young.	
Forks.	Clallam.	480																	R. H. Palmer.	
Fort Simcoe.	Yakima.	1,427	18	73.9	+2.2	101	1	44	15	38	0	-0.18	0	0	0	24	2	5	w.	Richard Newmark.
Jerome.	Stevens.	1,200	1	68.6		99	1†	38	15	51	0.08		0.08	0	0	17	14	0	w.	W. W. King.
Goat Lake.	Snohomish.	2,900	4								2.74		0.63	0	10				C. M. Mackintosh.	
Gold Basin.	do.	1,360	2																U. S. Forest Service.	
Gold Creek.	Yakima.	2,600	4								0.10		0.10	0	1	13	17	1	John W. Anderson.	
Gold Hill.	do.	4,454																	U. S. Reclamation Service.	
Goldendale.	Klickitat.	1,600	7	69.4		105	1	40	16†	49	0.01	-0.31	0.01	0	1	5	26	0	Klickitat Co. Abstract Co.	
Granite Falls.	Snohomish.	387	10								2.73	+1.06	1.68	0	8	18	9	4	C. H. Cleaver.	
Guler.	Klickitat.	2,200	4															Frank Kuehnel.		
Hanford.	Benton.	385		73.7		110	1	41	19	59	T.		T.	0	0	10	20	1	sw.	Frances Lee Bash.
Hatton.	Adams.	1,100	8	71.2		103	1	35	18	48	0.35		0.25	0	3	20	3	8	Dr. A. V. Marion.	
Huntsville.	Columbia.	1,400	5								0.41		0.16	0	3				Mrs. S. J. Hill.	
Irene Mountain.	Okanogan.	2,700	4								0.70		0.34	0	5	16	3	11	Mrs. Theo. Wheeler.	
Kennewick.	Benton.	368	13	77.0 <sup>c</sup>	+2.6	108 <sup>c</sup>	1	44 <sup>c</sup>	19	53 <sup>c</sup>	0.32	+0.06	0.32	0	1				R. E. Reed.	
Kent.	King.	53		64.6		93	1†	38	16	51	0.75		0.61	0	3	14	9	8	A. O. Jeffries.	
Kettle Falls.	Stevens.	1,265	4	68.3 <sup>b</sup>		94	1	38 <sup>b</sup>	18 <sup>b</sup>	45 <sup>b</sup>	0.88		0.47	0	7	19	11	1	H. H. Cole.	
Kiona.	Benton.	430	7	72.9		102	23	42	19	44	0.02		0.02	0	1	26	4	1	Dr. F. S. Hedger.	
Knowlton, near.	Okanogan.	3,800		60.0 <sup>a</sup>		99 <sup>a</sup>	23	38 <sup>a</sup>	15	39 <sup>a</sup>			0.72	0	5	11	20	0	se.	
Kosmos.	Lewis.	775	7	65.2		97	1	37	15	47	1.14		0.17	0	5	11	17	3	ne.	
La Center.	Clarke.	250	16	62.4	-1.2	93	21	38	16	49	0.62	-0.64	0.23	0	5	17	12	2	w.	
La Crosse.	Whitman.	1,400	4	68.9		102	1	33	19	53	0.32		0.15	0	2	24	7	2	w.	
Lake Clealum.	Kittitas.	2,171	4	64.6 <sup>a</sup>		99	1	36	16†	51	0.21		0.21	0	1	10	11	10	M. E. Schreck.	
Lake Kachess.	do.	2,235	5	64.4		98	1	35	16†	46	0.01		0.01	0	1	18	9	8	U. S. Reclamation Service.	
Lake Keechelus.	Chelan.	2,479	5	63.1		94	1	37	16	46	0.42		0.18	0	4	17	7	7	Do.	
Lakeside.	do.	1,116	22	73.0	+1.0	102	1	47	18†	37	0.23	-0.15	0.23	0	1	9	22	0	W. H. Van Meter.	
Laurel.	Klickitat.	1,900	4															Mrs. Minnie E. Strout.		
Lone Tree.	Ferry.	1,644	3	67.1		98	1	37	16†	48	1.24		0.13	0	2	24	7	2	Mrs. J. S. Myers.	
Longmires Springs.	Chehalis.	9		60.9		80	28	52	17†	22	1.79		1.20	0	8	21	2	2	U. S. Engineer Corps.	
Lost Creek.	Pierce.	2,800	2								0.55		0.40	0	5	11	18	2	National Park Ranger.	
McConline.	Okanogan.	3,125	4	73.6		103	1	43	15	43	T.		T.	0	0	20	7	4	P. H. Leese.	
McCumbers Ranch.	Grant.	1,072	2								0.10		0.10	0	1	19	13	0	L. F. McConline.	
Milton Ranch.	Yakima.	2,182	3															Mrs. Mary McCumber.		
Ferry.	do.	63.0		92	2	31	15	49										Knute Milton.		
Moses Lake.	Grant.	1,070									T.		T.	0	0	30	1	0	H. M. Flemming.	
Mottinger.	Benton.	307	13	75.0	+0.7	104	1	50	19	40	0.57	+0.26	0.55	0	2	29	1	1	G. H. Mottinger.	
Mount Pleasant.	Clallam.	500	2	60.4		85	10	44	14†	29	1.12		0.93	0	5	12	11	8	Wm. M. Dorr.	
Moxee.	Yakima.	1,000	21	70.7	+1.4	104	1	38	19	55	0.02	-0.17	0.02	0	1	19	12	0	H. B. Scudder.	
Newport.	Pend Oreille.	2,400	3	61.9		94	4	30	18	58	0.52		0.22	0	9	13	13	5	C. M. Talmadge.	
Nighthawk.	Okanogan.	3,050	4															Steve Nagy.		
North Head.	Pacific.	211	11	50.4	+1.5	76	21	51	1	21	0.07	+0.41	0.51	0	10	8	14	11	U. S. Weather Bureau.	
Northport.	Stevens.	1,350	14	67.4	+5.5	97	1†	40	18	48	0.57	-0.73	0.13	0	9	18	11	2	W. F. Case.	
North Sundale.	Klickitat.	4		74.4		103	1	47	18†	39	0		0	0	0			Ruth J. Shepard.		
North Yakima.	Yakima.	1,070	4	71.2		96	1†	44	15†	39	0.02		0.02	0	1	23	5	3	Albert Bender.	
Odessa.	Lincoln.	1,540	10	70.2		101	1	38	15	48	0.11		0.06	0	2	17	12	2	H. W. Rieke.	
Olga.	San Juan.	50	23	59.8	+0.8	80	1	46	18†	26	0.51	-0.49	0.26	0	3	14	13	4	Cecil S. Willis.	
Olympia.	Thurston.	45	35	61.0	+1.4	95	1†	40	20	53	0.66	-0.02	0.65	0	2	22	4	5	M. O'Connor.	
Omak.	Okanagan.	850	4	72.4		104	1	39	15†	50	0.25		0.14	0	3	21	6	4	Saint John Umbrite.	
Oroville.	do.	922	3	72.4		102	1	40	15	43	1.16		0.48	0	5	13	10	8	M. C. Jackman.	
Peela.	Garfield.	5,000	4															Samuel Grinnell, sr.		
Pomeroy.	do.	1,500	21	69.8	-0.8	99	1	40	15	47	0.71	+0.18	0.60	0	5	13	14	4	Peter McClung.	
Port Crescent.	Cowlitz.	250	18	56.6	+0.4	79	9	39	31	48	0.86	-0.04	0.61	0	5	13	14	5	U. S. Weather Bureau.	
Port Townsend.	Jefferson.	80	29	61.4	+0.6	84	10	48	18	31	0.73	-0.08	0.45	0	4	20	3	8	Frank Plummer.	
Prosser.	Benton.	661		72.6		103	1	40	18	49	T.		T.	0	0	23	8	0	E. L. Capps.	
Pullman.	Whitman.	2,550	21	71.8	+5.6	98	21	44	15	40	0.36	-0.42	0.12	0	4	17	14	0	State Agricultural College.	
Quets River.	Jefferson.	18		61.4		100	21	42	15	50	1.48		0.80	0	4	15	16	0	A. V. Higley.	
Quinalt.	Jefferson.	300	6	61.4		98	1	50	18	30	0.48		0.30	0	4	18	6	7	Chas. Shoemaker.	
Reardan.	Lincoln.	2,510	6	68.8	+3.7	96	2	36	19	44	0.48		0.25	0	4	20	7	4	Geo. B. Stocking.	
Republic.	Ferry.	2,628	13	64.3	+2.1	95	1	30	18	53	0.52		0.22	0	5	20	7	4	James W. Nicol.	
Rex Creek.	Chelan.	1,135	6															Agent N. P. R. R.		
Ritzville.	Adams.	1,825	14															R. R. Couger.		
Robertsville.	Klickitat.	7																H. C. Melcher.		
Rock Lake.	Whitman.	1,910	7															Hans Mumm.		
Rosalia.	do.	2,425	21	67.8	+2.8	94	1	39	19	45	0.26	-0.49	0.44	0	4	19	11	1	Mrs. Adella Russell.	
Russells Ranch.	Yakima.	2,870	4															U. S. Weather Bureau.		
Seattle.	King.	208		64.8	+1.7	88	1	50	18	30	0.45	-0.04	0.35	0	4	10	13	8	Mrs. H. L. Devin.	
Sedro Woolley.	Skagit.	38	16	62.3	+0.4	88	10	42	20	40	2.16	+0.32	1.21	0	7	16	9	6	C. E. Comstock.	
Sixprong.	Klickitat.	1,240	6	78.9		104	1	47	18	40	0.00		0.00	0	0	24	5	2	Skagit Power Co.	
Skagit Power Dam.	Whatcom.	510	3	66.0		100	1	44	16	43	1.77		0.70	0	6	20	3	8	James Byling.	
Snohomish.	Snohomish.	55	19	64.6	+2.7	93	21	42	20	48	2.18	+0.97	1.38	0	6	18	12	1	O. N. Wiswell.	
Snoqualmie Falls.	King.	667	14	64.4	+3.3	100	1	40	16	46	0.69	-0.85	0.57	0</td						

TABLE 1.—Climatological data for August, 1913. District No. 12, Columbia Valley—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<b>Washington—Contd.</b>																				
Waterville.	Douglas.	2,624	23	74.0	—	105	1	43	18	47	0.04	0.04	0	1	18	11	2	n.	O. R. Hopewell.	
Wanatchee.	Chehal.	639	—	69.5	+ 2.1	98	1	43	18	31	0.14	- 0.24	0.09	0	2	21	8	w.	A. A. Piper.	
Wanatchee (near).	Chehal.	1,169	14	70.6	—	104	22	45	15†	45	0.28	0.15	0	3	14	12	5	w.	Geo. A. Pitcher.	
White Salmon.	Klickitat.	325	—	65.4	+ 2.0	98	1	27	13†	51	0.11	- 0.57	0.11	0	1	24	4	3	sw.	C. W. J. Reckers.
Wilbur.	Lincoln.	2,303	14	67.6	—	101	1	37	19	57	0.43	0.40	0	3	23	2	6	sw.	R. J. Reeves.	
Wind River.	Skamania.	1,300	—	850	—	93*	21	40	15	42*	0.59	0.62	0	5	17	8	8	s.	U. S. Forest Service.	
Winthrop.	Okanogan.	1,765	2	67.6	—	101	1	37	19	57	0.43	0.40	0	3	14	10	6*	sw.	Methow Trading Co.	
Yacolt.	Clark.	850	—	66.9*	—	93*	21	40	15	42*	0.59	0.36	0	3	14	10	6*	sw.	C. R. Miller.	
Yale.	Cowlitz.	375	6	66.9*	—	93*	21	40	15	42*	0.59	0.36	0	3	14	10	6*	sw.	J. A. Williams.	
Zillah.	Yakima.	800	1	66.9*	—	93*	21	40	15	42*	0.59	0.36	0	3	14	10	6*	sw.	C. G. Ware.	
<b>Oregon.</b>																				
Agency Plains.	Crook.	2,383	—	61.4	—	87	22	35	15†	37	T.	T.	0	0	25	4	2	nw.	W. S. Williams.	
Albany.	Linn.	212	31	67.5	+ 1.6	97	21	41	18	44	0.50	+ 0.01	0.16	0	6	8	11	n.	F. M. French.	
Ashland.	Jackson.	1,963	29	68.5	- 0.5	95	20	39	18	47	0.08	- 0.29	0.03	0	3	19	6	nw.	Louis Dodge.	
Astoria.	Clatsop.	16	52	62.8	+ 1.0	93	27	49	19	29	0.41	- 0.63	0.17	0	10	15	9	nw.	Irving Club.	
Austin.	Grant.	4,250	—	59.4	—	94	24†	26	19	56	0.26	0.12	0	4	13	13	5	w.	U. S. Forest Service.	
Baker.	Baker.	3,468	23	65.1	+ 0.2	93	21	37	19	46	1.07	+ 0.68	0.63	0	6	18	11	2	nw.	U. S. Weather Bureau.
Bend.	Crook.	3,629	—	65.0	—	96	22	39	14†	52	0.24	0.21	0	2	20	11	2	s.	Band Bulletin.	
Black Butte.	Lane.	1,200	12	62.5	- 0.9	90	21	39	15†	47	0.16	- 0.07	0.10	0	1	26	3	2	nw.	William Harris.
Blalock.	Gilliam.	237	15	78.7	+ 2.9	103*	1	51†	15	42*	T.	- 0.12	T.	0	0	21	64	0	w.	Geo. W. Long.
Brogan.	Malheur.	2,600	3	66.9*	—	94	21	41	15†	51	0.12	0.13	0.08	0	2	14	11	6	nw.	O. D. Loveless.
Burns.	Harney.	4,157	23	68.6	+ 3.8	100	23	34	17	56	0.19	+ 0.05	0.15	0	2	26	5	0	sw.	J. C. Welcome, Jr.
Camp Creek.	Crook.	—	—	68.6	—	94	23	34	17	56	0.19	+ 0.05	0.15	0	2	26	5	0	sw.	E. W. Nelson.
Cascade Locks.	Hood River.	100	23	68.4	+ 0.6	91	10†	45	16	39	0.85	0.0	0.47	0	5	24	3	4	w.	Val. W. Tomkins.
Cazadero.	Clackamas.	503	4	68.4	—	102	21	42	19†	49	0.83	0.52	0	3	15	12	4	nw.	All Drill.	
Central Point.	Jackson.	—	—	68.4	—	94	21	35	18	53	0.48	0.20	0	5	22	7	2	sw.	A. C. Fiero.	
Chiloquin.	Klamath.	4,200	—	60.6	—	94	24	26	18	53	0.48	0.20	0	6	21	9	1	sw.	H. W. Hincks.	
Clear Lake.	Linn.	3,030	—	61.2	—	92	1†	29	31	46	0.81	0.38	0	6	18	8	5	nw.	R. B. Grondahl.	
Cliff.	Lake.	4,300	6	61.5	—	94	24	20	18	61	0.65	0.18	0	6	16	13	2	nw.	John C. Green.	
Combe Flat.	Crook.	4,027	—	64.0	—	94	21	42	15	41	0.64	- 0.13	0.37	0	11	9	13	nw.	J. R. Breeze.	
Condon.	Gilliam.	2,884	6	66.9*	—	94	21	41	15†	51	0.12	- 0.28	0.08	0	2	14	11	6	nw.	C. F. Kennedy.
Corvallis.	Benton.	2,266	—	66.9*	—	94	21	42	15†	51	0.12	0.05	0	4	18	12	1	sw.	Oregon Agricultural College.	
Crescent.	Klamath.	4,400	1	59.4	—	95	24	23	18	65	0.12	0.12	0.05	0	4	18	12	1	sw.	C. W. Long.
Culver.	Crook.	68.0	—	100	1	34	15†	51	0.12	0.12	0.05	0.12	0	1	23	7	1	nw.	O. C. Young.	
Dayville.	Grant.	2,200	19	66.8	- 0.2	94	1†	35	19	51	1.04	+ 0.70	0.60	0	6	21	9	1	nw.	J. Campbell-Martin.
Deadwood.	Lane.	350	3	66.2*	—	90	11†	42	31	41	0.28	0.12	0	4	26	3	2	nw.	Supt. Salmon Hatchery.	
Doraville.	Columbia.	800	11	63.0	+ 1.1	94	21	42	15	41	0.64	- 0.13	0.37	0	6	16	14	1	nw.	Ios. Hackenberg.
Drain.	Douglas.	300	11	66.5	+ 1.8	94	21	41	15†	51	0.12	- 0.28	0.08	0	2	14	11	6	nw.	Ira Wimberly.
Echo.	Umatilla.	625	9	66.9	—	94	21	42	15†	51	0.12	0.05	0.05	0	4	18	12	1	sw.	R. B. Stanfield.
Ella.	Morrow.	830	9	66.9	—	94	21	42	15†	51	0.12	0.05	0.05	0	4	18	12	1	sw.	Carl F. Troedson.
Eugene.	Lane.	449	23	67.0	+ 2.1	97	21	42	18	42	0.29	- 0.33	0.12	0	4	17	7	7	n.	Paul G. Bond.
Folly Farm.	Malheur.	3,710	68.2	—	97	19†	27	17	63	0.08	0.08	0	0	2	22	9	0	w.	W. R. Gardner.	
Forest Grove.	Washington.	220	24	68.2	—	90	11†	42	31	41	0.28	0.12	0	4	26	3	2	nw.	Pacific University.	
Gardiner.	Douglas.	72	24	68.2	—	94	21	42	15	41	0.64	- 0.13	0.37	0	6	16	14	1	w.	Wm. S. Angus.
Glassbuttes.	Crook.	4,200	—	68.6	—	101	22	38	18	51	0.63	0.65	0	1	26	14	3	w.	C. J. Stauffer.	
Glenadale.	Douglas.	144	9	68.6	—	94	21	39	18	51	0.63	0.65	0	3	15	5	11	sw.	Carl Olson.	
Glenora.	Tillamook.	575	22	63.2	+ 0.3	93	21	42	20	49	1.34	+ 0.19	0.70	0	3	15	5	11	sw.	Mrs. J. A. Reeher.
Gold Beach.	Curry.	40	12	68.6	—	94	21	42	18	42	0.29	- 0.33	0.12	0	4	17	7	7	n.	John W. Riley.
Grants Pass.	Sherman.	956	25	70.2	+ 1.6	101	22	38	18	54	0.52	+ 0.23	0.43	0	4	18	10	3	sw.	John B. Paddock.
Grass Valley.	Sherman.	2,381	12	65.6	—	98	1	31	9	52	0	0	0	0	14	11	6	nw.	Agent O.-W. R. & N. Co.	
Gurdane.	Umatilla.	3,500	4	64.2	—	92	1	29	18	48	0.09	0.05	0	3	24	6	1	w.	Miss Belle Ely.	
Headworks.	Clackamas.	719	11	63.6	+ 0.8	96	5	31	6†	57	1.55	- 0.42	0.75	0	7	15	12	4	se.	Portland Water Works.
Harbor.	Curry.	130	—	61.7	—	97	7	41	29	34	0.05	0.02	0	3	11	15	5	nw.	Clark E. Saunders.	
Heppner.	Morrow.	1,950	23	68.1	—	99	1	40	19	40	0.85	+ 0.58	0.65	0	6	16	14	1	w.	Frank Gilliom.
Hermiston.	Umatilla.	451	6	73.0	—	105	1	40	19	58	0.44	0.43	0	2	18	10	3	sw.	C. W. Kellogg.	
Hillcrest Orchard.	Jackson.	1,595	—	66.9	—	94	24	37	18	36	0.71	+ 0.46	0.47	0	4	15	13	3	nw.	R. H. Parsons.
Hollywood.	Jackson.	1,400	—	66.9	—	94	24	37	18	36	0.71	+ 0.46	0.47	0	4	15	13	3	nw.	A. C. Allen.
Hood River.	Hood River.	300	23	69.6	+ 3.1	103	1	43	15†	46	0.16	- 0.10	0.10	0	2	26	5	0	w.	Edward A. Birge.
No. 2.	do.	455	1	71.0	—	104	22	44	19	48	T.	T.	0	0	23	8	0	w.	C. C. Starring.	
No. 3.	do.	620	1	64.8	—	101	1	36	16	54	0.18	0.13	0	2	17	14	2	0	w.	U. A. Newman.
No. 4.	do.	850	1	67.5	—	101	1	40	15†	51	0.23	0.16	0	2	29	2	0	w.	P. L. Smith.	
No. 5.	do.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	J. G. Jarvis.
Huntington.	Baker.	2,165	12	76.2	- 1.6	99	24	52	15	40	0.02	- 0.27	0.02	0	1	11	20	0	w.	Agent O.-W. R. & N. Co.
Imperial.	Crook.	503	—	60.3	—	94	24	20	18	62	0.52	0.33	0	3	26	3	2	nw.	Claude Cone.	
Jacksonville.	Jackson.	1,610	25	70.4	+ 0.7	96	22	43	18	45	0.22	- 0.22	0.15	0	2	24	4	3	nw.	E. Britt.
Joseph.	Wallowa.	4,400	24</																	

TABLE 1.—Climatological data for August, 1913. District No. 12, Columbia Valley—Continued.

Stations.	Co	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<b>Oregon—Continued.</b>																				
Powell Butte.	Crook.	3,240	.....	64.7	.....	96	1	31	15	51	1.00	.....	0.40	0	3	16	9	w.	Earl Saunders.	
Prairie City.	Grant.	3,425	2	65.6	.....	97	21	33	19	55	0.75	.....	0.22	0	7	19	11	nw.	A. M. F. Kirchheimer.	
Prineville.	Crook.	2,884	17	.....	101	1	.....	.....	.....	.....	1.23	+ 0.95	0.40	0	5	20	6	w.	Mrs. T. M. Baldwin.	
Prospect.	Jackson.	2,800	7	66.7	.....	98	27	33	18	55	0.30	.....	0.29	0	2	15	14	s.	Charles A. Lower.	
Ramsey.	Wasco.	1,350	13	65.5	.....	95	2	39	15†	46	0.00	.....	0	0	0	25	0	w.	Mrs. Iva B. Collins.	
Range.	Grant.	3,500	5	62.6	.....	97	21†	29	15	66	0.59	.....	0.15	0	5	20	6	s.	Mrs. Emma Aruckle.	
Redmond.	Crook.	2,990	2	60.8*	.....	91	30	32‡	18	42*	0.11	.....	0.09	0	2	15	14	nw.	T. G. Stevens.	
Richland.	Baker.	2,350	12	.....	.....	98	20	41	19	54	0.74	.....	0.72	0	2	26	3	n.	L. G. Morgan.	
Riddle.	Douglas.	715	.....	68.8	.....	98	20	41	19	54	0.74	.....	0	0	0	22	9	n.	P. A. Wilson.	
Rio Hermoso.	Crook.	2,110	3	66.6	.....	96	22†	34	18	49	0.00	.....	0	0	0	0	0	w.	C. T. Hubbard.	
Riverside.	Malheur.	3,200	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Leah Fairman.	
Robville.	Crook.	4,000	.....	60.2	.....	92	17†	27	15†	56	0.39	.....	0.29	0	2	27	4	0	nw.	Loren B. Robb.
Roseburg.	Douglas.	510	35	68.6	+ 2.2	97	21	49	18	49	0.19	- 0.14	0.10	0	2	18	9	n.	U. S. Weather Bureau.	
Salem.	Marion.	120	23	69.0	+ 2.8	94	21	49	18	38	0.30	- 0.13	0.28	0	2	23	0	s.	M. P. Baldwin.	
Seneca.	Grant.	4,800	2	58.4	.....	90	24	22	19	59	1.34	.....	0.55	0	6	21	3	w.	E. J. Southworth.	
Silver Lake.	Lake.	4,700	16	65.2	+ 4.3	94	24	28	18	53	1.10	+ 0.78	0.75	0	2	20	11	0	G. W. Marvin.	
Siskiyou.	Jackson.	4,115	5	63.4	.....	90	24	38	16†	44	2.38	.....	1.15	0	4	8	14	sw.	U. S. Weather Bureau.	
Sparta.	Baker.	4,150	22	67.2	- 0.6	97	27	35	15†	51	0.01	- 0.66	0.01	0	1	24	7	0	J. A. Wright.	
Stafford.	Clackamas.	400	17	66.6	+ 0.2	95	21	45	16	36	0.89	+ 0.03	0.31	0	6	6	6	ne.	John P. Gage.	
Table Rock.	Jackson.	1,215	70	2	101	22†	35	18	58	53	0.12	0.11	0.12	0	2	18	9	4	nw.	Mrs. J. C. Pendleton.
Talent.	do.	1,800	69.8	.....	97	22	41	18	49	0.14	.....	0.10	0	0	2	14	12	5	nw.	T. F. Smith.
The Dalles.	Wasco.	112	39	75.4	+ 5.1	105	1	48	16	45	T.	- 0.17	T.	0	0	19	5	w.	Judd S. Fish.	
Tillamook.	Tillamook.	.....	62.2‡	.....	85	8	44	15†	39	0.09	.....	0.05	0	3	10	13	8	nw.	Will Spaulding.	
Toledo.	Lincoln.	75	23	.....	.....	.....	.....	38	31	.....	.....	0.20	- 0.34	0	1	25	6	0	nw.	C. B. Crosmo.
Umatilla.	Umatilla.	340	25	75.8	+ 2.1	102	1†	47	19	44	0.64	+ 0.34	0.57	0	2	16	8	9	sw.	Mrs. H. T. Duncan.
Union.	Union.	2,787	2	64.0	.....	95	28	34	19	50	0.66	.....	0.39	0	6	19	6	6	nw.	Robert Withycombe.
Vale.	Malheur.	2,242	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. P. Osborne.	
Van.	Harney.	3,506	2	68.9	- 0.1	104	24	43	16	52	0.08	- 0.18	0.06	0	2	29	2	0	ne.	George Howe.
Vida.	Lane.	1,100	2	65.5	.....	94	21†	40	18	43	0.81	.....	0.20	0	7	19	7	w.	W. H. Pendell.	
Waldo.	Josephine.	1,900	1	67.9‡	.....	94b	22†	38‡	14	42‡	0.05	.....	0.05	0	1	18	9	4	w.	J. H. Witrock.
Wallace Orchard.	Polk.	170	4	65.8	.....	94	21	41	16	44	0.25	.....	0.14	0	4	6	20	5	sw.	Charles A. Park.
Wallowa.	Wallowa.	2,935	10	.....	.....	30‡	19	35‡	18	47‡	1.53	+ 0.65	0.66	0	8	9	12	10	nw.	L. J. Coverstone.
Wamic.	Wasco.	1,500	13	66.8‡	.....	102‡	22	35‡	18	47‡	T.	.....	T.	0	0	12‡	8‡	e.	A. J. Swift.	
Warmspring.	Crook.	1,500	11	71.8	+ 3.9	103	1	35	31	49	T.	- 0.38	T.	0	0	4	26	1	w.	George W. Robbins.
Wasco.	Sherman.	1,263	70.2	.....	101	1	42	19	45	0.07	.....	0.07	0	1	23	6	2	w.	J. R. Howell.	
Weston.	Umatilla.	1,800	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.15	0	2	13	13	5	sw.	M. A. Baker.
Whitaker.	Crook.	4,250	58.6	.....	94	25	20	19	63	0.52	.....	0.37	0	4	17	14	0	nw.	Frank Percival.	
Williams.	Josephine.	1,368	21	67.7	+ 1.4	98	22	37	14	49	0.17	- 0.11	0.10	0	2	24	4	3	n.	Francis J. Le Roy.
Yonna.	Klamath.	4,146	6	63.0	.....	95	24	30	18†	53	0.31	.....	0.10	0	4	12	13	6	w.	Ward Rueck.

\*, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.

\*\* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for August, 1913. District No. 12, Columbia Valley.*

TABLE 2.—*Daily precipitation for August, 1913. District No. 12, Columbia Valley—Continued.*

Stations.	Watershed.	Day of month.																																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
<i>Idaho—Continued.</i>																																			
Mesa   .	Weiser	T.																															T.	0.15	
Middle Fork.	Clearwater																																T.	0.14	
Milner.	Snake																																T.	0.28	
Moore.	Lost R. Reg.																																T.	0.63	
Moscow.	Palouse																																T.	0.31	
Mountain Home.	Snake																																T.	0.57	
Murtaugh   .	do.																																T.	0.72	
New Meadows.	Salmon	T.																															T.	0.84	
Nezperce.	Clearwater																																T.	1.25	
Oakley.	Snake																																T.	1.87	
O'Han Bar.	Clearwater																																T.	0.04	
Orofino.	Bear																																T.	0.68	
Paris.	Payette																																T.	0.03	
Payette.	Salmon																																T.	0.36	
Pierson.	Boise																																T.	0.38	
Pleasant Valley.	Port Neuf.	T.																															T.	0.38	
Pocatello.	do.	T.																															T.	0.27	
Poplar.	Snake																																T.	0.09	
Porthill.	Kootenai																																T.	0.79	
Priest River Experiment Station:																																			
No. 1.	Pend Oreille	T.																																0.02	
No. 2.	do.	T.																																0.04	
No. 3.	do.																																	0.06	
Pyle Creek.	Payette																																	0.16	
Richfield.	Big Wood	T.																																0.38	
Rogerson.	Snake																																	1.17	
Roseberry.	Payette																																		
Roseworth.	Snake																																	0.16	
Rupert.	do.																																	0.16	
St. Anthony.	do.																																		
St. Maries.	St. Joe																																	0.02	
St. Michael's Priory.	Clearwater	T.																																0.73	
Salmon.	Salmon																																	0.59	
Sandpoint.	Pend Oreille																																	0.60	
Sheep Hill.	Boise																																	0.19	
Shoshone.	Big Wood																																	0.05	
Silver City.	Owyhee																																	0.70	
Soldier Creek.	Big Wood																																	0.39	
Spirit Lake.	Pend Oreille																																	0.19	
Springfield.	Boise																																	0.13	
Sugar   .	Snake																																	0.00	
Sunnyside.	do.																																	0.10	
Tripod Mountain.	Payette																																	T.	0.17
Twin Falls.	Snake																																	0.09	
Vernon.	do.																																	0.88	
Wallace.	C. d'Alene	T.																																0.54	
Weiser.	Weiser																																	0.05	
Wendell.	Big Wood																																	0.23	
Weston.	Bear																																		
<i>Washington.</i>																																			
Aberdeen.	Coast	.07																																1.08	
Anacortes.	Puget Sound																																	1.44	
Anatone.	Snake	T.																																0.77	
Baker.	Puget Sound																																	2.60	
Bellingham.	do.	T.																																2.0	
Bellingham (near).	do.																																	1.55	
Blaine.	do.																																	T.	0.91
Blewett.	Wenatchee.																																	0.48	
Bremerton.	Puget Sound																																	0.40	
Brewster.	Columbia																																	1.32	
Buckley.	Puget Sound																																	0.38	
Bumping Lake.	Yakima																																	T.	0.43
Cedar River.	Puget Sound																																	1.77	
Centralia.	Coast																																	0.05	
Clearbrook.	Puget Sound																																	0.81	
Cle Elum.	Yakima																																	T.	0.54
Colfax.	do.																																	0.04	
Colville.	Columbia																																	0.27	
Conconully.	Okanogan																																	0.00	
Coulee City.	Columbia																																	T.	
Darrington.	Yakima																																	0.42	
Davenport.	Puget Sound																																	0.26	
Dayton.	do.																																		

TABLE 2.—*Daily precipitation for August, 1913. District No. 12, Columbia Valley—Continued.*

Stations.	Watershed.	Day of month.																													Total						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
<i>Washington—Con.</i>																																					
Kettle Falls.	Columbia.								.03				.05	.02	.47			.20															.02	.08	0.88		
Kiona.	Yakima.																																		0.02		
Kosmos.	Columbia.																																		1.14		
La Center.	do.																																		0.62		
La Crosse.	Palouse.	T.	.02	.15																															0.32		
Lake Clealum.	Yakima.																																		0.21		
Lake Kachess.	do.																																		0.01		
Lake Keechelus.	do.																																		0.42		
Lakeside.	Columbia.																																		0.23		
Laurel.	do.																																		0.15		
Laurier.	Kettle.																																		1.24		
Lone Tree.	Coast.	.07		.03	.08																														1.79		
Longmire Springs.	Puget Sound																																		0.85		
Lost Creek.	Columbia.	.20																																	0.10		
McConline.	do.																																		0.57		
McCumbers Ranch.	do.																																		1.12		
Moses Lake.	do.																																		0.02		
Mottinger.	do.																																		0.22		
Mount Pleasant.	Coast.																																		0.02		
Moxee.	Yakima.																																		0.02		
Newport.	Pend Oreille.	T.	.01		.06	.02																												0.97			
North Head.	Coast.	.05																																	0.57		
Northport.	Columbia.	.03		T.		.02																												1.16			
North Sundale.	do.																																		1.16		
North Yakima.	Yakima.																																		0.02		
Odessa.	Columbia.																																		0.11		
Oila.	Puget Sound	T.																																	0.51		
Olympia.	do.	T.																																	0.66		
Omak.	Okanogan.																																		0.25		
Oroville.	do.	.30		.30		.01																												1.16			
Peola.	Snake.	.02		.30		.01																												0.95			
Pomeroy.	do.	.60																																	0.71		
Port Crescent.	Coast.	.01																																	0.66		
Port Townsend.	Puget Sound																																		0.73		
Frosser.	Yakima.	T.																																	0.26		
Fullman.	Palouse.																																		1.48		
Quets River.	Coast.																																		0.48		
Quinalt.	do.																																		0.52		
Reardan.	Spokane.																																		0.22		
Republic.	Kettle.	.02		.20																														0.61			
Rex Creek.	Columbia.																																		0.26		
Ritzville.	do.																																		0.19		
Robertsville.	do.																																		0.00		
Rock Lake.	Palouse.																																		0.61		
Rossia.	do.	.01	.08	T.																														0.26			
Russells Ranch.	Yakima.	T.																																	0.19		
Seattle.	Puget Sound	T.																																	0.45		
Sedro Woolley.	do.																																		2.16		
Sixstrong.	Columbia.																																		0.00		
Skagit Power Dam.	Puget Sound																																		1.77		
Snohomish.	do.	.03																																	2.18		
Snoqualmie Falls.	do.																																		0.69		
Snoqualmie Pass.	Yakima.																																		0.25		
Snyders Ranch.	Columbia.																																		2.32		
South Bend.	Coast.																																		0.22		
Spokane.	T.	.01	T.	.02																														0.83			
State University.	Puget Sound																																		0.77		
Stokes Ranch.	Columbia.	T.																																	0.94		
Sullivan Lake.	Pend Oreille.	</td																																			

TABLE 2.—*Daily precipitation for August, 1913. District No. 12, Columbia Valley—Continued.*

Stations.	Watershed.	Day of month.																															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
Oregon—Continued.																																	
Brogan.	Malheur																																
Buena Vista.	Snake.	.10																															1.19
Burns.	SE. drainage	.01																														0.19	
Burns Mill.	do.	.01																														0.68	
Butte Falls.	Rogue.																															0.18	
California Gulch.	Umatilla																															0.40	
Camp Creek.	Deshutes.																															0.88	
Cascade Locks.	Columbia.																															0.72	
Cascadia.	Willamette.	.07	T.	.07																												0.72	
Cazadero.	do.																															0.83	
Centralpoint.	Rogue.																															0.83	
Chiloquin.	Klamath.	T.	.01																													0.43	
Christmas Lake.	SE. drainage	.10	.01																													0.57	
Clear Lake.	Willamette.	.10	.12	T.	.02																										0.81		
Cliff.	SE. drainage	.05	T.	.04																											0.65		
Columbia Mine.	Snake.		.13	.03	1.	10																									1.44		
Condon.	John Day.																															T.	
Coquille River L. H.	Coast.	T.																														0.18	
Cornucopia.	Snake.	T.	T.	T.	.02																											0.18	
Corvallis.	do.																															0.17	
Cracker Creek.		T.		.03	.02	.08																									0.12		
Crescent.	Deshutes.	.05	.02																													0.12	
Culver.	do.	.12																														0.12	
Dayville.	John Day.		T.	.02	.60																											1.04	
Deadwood.	Coast.																															0.28	
Diamond.	SE. drainage																															0.58	
Doraville.	Columbia.	T.	.01																													0.64	
Drain.	Umpqua.																															0.12	
Dufur.	Columbia.	.01																														0.01	
Echo.	Umatilla.																															0.01	
Ella.	Columbia.																															0.66	
Embody.	SE. drainage																															1.11	
Eugene.	Willamette.	.08																														0.29	
Fir Glen.	Coast.	.14	.01																													0.23	
Florence.	do.																															0.22	
Folly Farm.	Malheur.		.08																													0.08	
Forest Grove.	Willamette.																															0.08	
Fort Rock.	SE. drainage	.25	T.																													0.85	
Galice.	Rogue.	T.																														0.06	
Gardiner.	Umpqua.																															0.66	
Gibbon.	Umatilla.																															0.65	
Glassbutte.	Deshutes.																															0.66	
Glencoe.	Columbia.																															0.65	
Glendale.	Umpqua.	.65																														1.34	
Golden Falls.	Coast.	T.	.02	.01																												0.15	
Grants Pass.	Rogue.	.43	T.																													0.52	
Grass Valley.	John Day.	.15	.26																													0.00	
Greenhorn.	Snake.		.15	.26																												0.73	
Gumboot.	do.																															0.73	
Gurdane.	Columbia.																															0.09	
Happy Home.	Umpqua.	T.																														0.30	
Harbor.	Coast.	T.	T.	.02	T.																										0.05		
Hazeldell.	Willamette.	T.	.15	T.																												0.15	
Headworks.	do.																															0.07	
Heppner.	Columbia.	.01																														0.85	
Hermon.	Umatilla.																															0.44	
Hilgard.	Gnd. Ronde.																															1.50	
Hillerest Orchard.	Rogue.																															0.97	
Hollywood Orchard.	do.																															0.15	
Hood River:	Columbia.																															0.15	
No. 2.	do.																															T.	
No. 3.	do.																															.05	
No. 4.	do.																															0.23	
Hoover.	Willamette.	.03																														0.93	
Howardville.	Gr'd Ronde.	.04																														0.70	
Huntington.	Snake.																															0.02	
Ibex Mine.	Deshutes.																															0.38	
Ironside.	Snake.																															0.52	
Jacksonville.	Rogue.	.07																														0.22	
Joseph.	Gr'd Ronde.	.02	.55	.65																												1.70	
Klamath Falls.	Klamath.	.02																														0.71	
La Grande.	Gr'd Ronde.																															0.09	
Laddlaw.	Deshutes.																															0.42	
Lakeview.	Pitt.																															0.11	
La Fine.	Deschutes.	.03																														0.82	
Lilyglen.	Rogue.	.06	.03																														

TABLE 2.—*Daily precipitation for August, 1913. District No. 12, Columbia Valley—Continued.*

Stations.	Watershed.	Day of month.																													Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Oregon—Continued.																																		
Pendleton.	Umatilla.																																	0.61
Peninsula.	Deschutes.	.10																															0.10	
Persit.	Rogue.		T.																														0.15	
Pilot Rock.	Umatilla.																																0.16	
Pompeii.	Columbia.																																	
Portland.	Willamette.																																	
Port Orford.	Coast.	.07																															0.76	
Post.	Deschutes.																																0.33	
Powell Butte.																																	1.00	
Power House.	Columbia.		T.	T.																												0.31		
Prairie City.	John Day.	.20	.09	.06																												0.75		
Prineville.	Deschutes.	T.	.40	.10																												1.23		
Prospect.	Rogue.																															0.30		
Rager Creek.	Deschutes.	T.	.03																													0.74		
Ramsey.	Columbia.																															0.00		
Range.	John Day.																															0.58		
Ray Creek.	Columbia.	T.	T.	T.	T.																										0.94			
Redmond.	Deschutes.																															0.11		
Reston.	Umpqua.	.05	.01																													0.17		
Richland.	Snake.																																	
Riddle.	Umpqua.	.72																														0.74		
Riley.	SE drainage.																															1.00		
Rio Hermoso.	Deschutes.																															0.00		
Riverdale.																																		
Riverside.	Malheur.	T.																																
Robbville.	Deschutes.																															0.39		
Roseburg.	Umpqua.	T.	.04																													0.19		
Salem.	Willamette.		T.																													0.30		
Seneca.	SE. drainage.	.12	.08																													1.34		
Silver Lake.																																1.10		
Siskiyou.																																2.38		
Sisters.	Deschutes.	.19	.06																													0.34		
Sparta.	Snake.	T.																														0.01		
Stafford.	Willamette.																															0.89		
Starkey.	Gr'de Ronde.		.37																													1.36		
Summit.	Willamette.	T.	.04																													0.50		
Summit Prairie.	Deschutes.																															2.35		
Susanville.	John Day.		.10	.15	.36																										0.12			
Table Rock.	Rogue.	.01																														0.14		
Talent.																																1.10		
Tamarack.	John Day.	.06		.17	.07																											0.36		
The Dalles.	Columbia.		.05	.01																												0.09		
Tillamook.	Coast.																															0.20		
Toledo.	Rogue.	.04	T.																													0.43		
Trail.	Columbia.	.07																														0.64		
Umatilla.	Gr'de Ronde.		.01																													0.66		
Union.																																0.08		
Vale.	Malheur.	T.	T.	.06																												0.25		
Valley Falls.	SE. drainage.																															0.36		
Van.	Malheur.																																	
Vida.	Willamette.	.07	.20	.02																												0.81		
Vistillas.	Pitt.																															0.34		
Waldo.	Rogue.	T.																														0.05		
Wallace Orchard.	Willamette.	.01	T.	T.	.11		.05																								0.25			
Walloupa.	Gr'de Ronde.	.06	T.	T.																												0.95		
Wamie.	Deschutes.		.08		.63	.01	.05																								1.58			
Warm Springs.																																T.		
Wasco.																																0.07		
Welches.	Columbia.		.01																													1.17		
Weston.	Walla Walla.																															0.25		
Whitaker.	Deschutes.																															0.82		
Williams.	Rogue.	T.	.10																													0.17		
Yonna.	Int. drainage.																															0.31		

\* Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

|| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for August, 1913. District No. 12, Columbia Valley.*

Date.	Montana.				Idaho.																Salmon.		Shoshone.		Vernon.		Wallace.		
	Kalispell.		Missoula.		Afton, Wyo.		Boise.		Bonners Ferry.		Hot Spring.		Lewiston.		Mackay.		New Meadows.		Pocatello.		Salmon.		Shoshone.		Vernon.		Wallace.		
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
1.	88	50	95	48	85	36	92	60	94	49	92	51	101	62	82	45	91	34	88	52	94	42	93	57	80	43	93	50	
2.	84	56	90	54	83	44	92	72	76	51	95	70	101	68	81	39	86	46	88	63	89	43	93	64	80	50	86	53	
3.	88	58	96	54	77	41	95	65	93	57	97	65	99	67	79	36	83	44	86	63	93	49	95	62	84	50	92	53	
4.	88	55	95	52	80	46	91	65	94	51	98	60	95	62	83	40	93	48	85	59	90	47	93	60	81	58	91	49	
5.	85	56	88	52	78	46	87	64	85	50	83	62	95	69	78	42	86	58	83	61	84	59	76	55	82	53	82	53	
6.	79	53	84	52	77	41	85	57	76	53	90	55	86	67	81	43	82	50	83	52	84	51	87	52	74	46	76	54	
7.	74	57	79	60	76	37	82	57	75	46	87	58	84	69	81	44	78	44	81	65	82	55	72	44	74	47	72	52	
8.	64	47	64	50	78	38	81	55	72	53	86	56	82	62	80	43	73	38	82	63	79	45	83	58	75	45	72	52	
9.	68	45	68	46	72	34	78	53	73	47	82	55	82	53	82	41	72	32	75	32	76	44	79	55	66	48	74	41	
10.	73	42	42	76	32	86	55	80	48	88	53	92	54	81	44	74	31	82	46	84	37	86	49	76	39	81	41	70	
11.	84	45	94	46	82	36	91	59	86	48	92	62	96	59	80	40	86	38	85	55	89	41	89	56	80	44	87	46	
12.	72	48	81	52	81	36	88	60	75	57	91	58	79	61	77	46	84	44	83	61	88	47	90	53	77	54	74	46	
13.	80	43	84	48	82	41	87	67	56	69	44	91	56	73	58	80	45	84	44	87	60	90	41	85	56	80	50	73	45
14.	61	46	64	52	80	46	70	54	57	45	88	55	74	54	80	46	74	42	74	53	78	55	72	46	60	48	72	35	
15.	68	42	72	36	80	33	79	52	68	36	92	48	78	48	75	41	74	28	79	45	80	30	92	37	83	45	72	36	
16.	75	38	81	38	81	35	84	52	77	55	85	49	88	57	81	42	80	31	86	50	85	38	87	53	80	54	77	40	
17.	77	47	82	49	83	35	80	53	64	49	86	56	77	56	80	43	78	30	87	50	84	48	84	78	45	62	44	62	
18.	65	41	74	53	84	34	76	48	65	56	86	56	79	54	77	56	78	46	74	38	81	47	81	45	79	49	76	42	
19.	71	36	80	36	87	33	89	46	80	38	90	46	88	48	82	46	84	24	87	46	85	38	90	49	78	45	77	35	
20.	75	39	83	41	87	36	90	52	87	40	92	53	87	43	87	30	91	53	81	37	83	30	93	50	86	45	81	38	
21.	81	42	91	40	86	35	97	56	86	44	95	52	100	54	88	46	94	29	92	51	92	41	96	52	86	42	90	40	
22.	86	46	90	46	89	38	90	67	92	48	94	60	88	59	88	51	93	34	94	52	92	41	99	58	82	46	91	46	
23.	90	54	96	57	87	37	94	62	86	49	97	66	103	61	86	47	95	40	90	67	96	52	94	59	85	56	90	51	
24.	89	52	92	56	88	45	96	64	87	44	99	62	96	62	84	44	94	42	93	62	95	48	95	57	86	51	86	49	
25.	86	46	96	46	91	41	89	63	90	40	95	65	80	58	91	55	90	38	94	59	95	49	97	59	89	53	89	45	
26.	89	56	89	60	86	48	90	69	86	53	92	63	92	62	88	63	88	42	88	68	91	62	90	67	80	53	84	54	
27.	85	50	88	54	87	43	90	60	88	50	95	62	83	57	83	56	88	42	87	64	88	53	92	58	82	54	85	45	
28.	84	46	96	44	87	49	98	68	80	44	99	64	100	58	86	54	92	42	92	59	91	46	96	56	87	51	92	44	
29.	77	54	85	58	87	45	88	67	86	40	94	70	92	65	82	55	86	48	90	61	91	52	92	59	83	53	81	54	
30.	79	50	89	48	69	46	88	68	60	58	84	44	90	61	96	61	79	54	83	32	82	67	86	55	87	63	88	52	
31.	73	48	78	50	77	47	86	58	71	46	91	67	81	59	81	36	81	62	88	43	87	53	83	50	80	46	84	53	
Mns..	78.6	48.0	84.5	49.2	81.9	39.8	87.4	59.0	80.1	46.3	91.1	58.4	88.9	59.4	82.1	46.1	84.3	38.5	85.6	56.8	87.4	46.5	88.7	55.9	79.9	48.3	80.7	47.0	

Date.	Weston, Idaho.		Washington.																									
			Aberdeen.	Blaine.	Colville.	Kosmos.	Lakeside.	North Head.	North Yakima.	Odessa.	Port Crescent.	Seattle.	Sixprong.	Spokane.	Tacoma.	Max.	Min.	Max.	Min.	Max.	Min.							
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.						
1.	91	45	79	58	84	53	97	50	97	50	102	68	57	51	96	58	101	53	79	55	88	60	104	72	95	60	90	60
2.	89	56	79	60	79	58	96	54	90	58	97	68	61	56	94	70	97	67	64	52	80	60	98	72	88	65	78	59
3.	88	57	68	57	81	50	95	55	83	51	90	64	62	58	88	60	98	57	66	49	82	60	96	64	92	63	81	58
4.	91	55	74	53	76	56	94	49	82	58	97	64	62	58	94	67	98	58	65	52	73	59	98	76	93	57	75	59
5.	92	55	76	50	73	49	85	48	82	57	95	68	66	58	91	67	93	66	65	74	76	88	74	91	57	78	58	
6.	87	48	76	59	74	53	85	51	78	54	83	66	62	59	87	62	82	57	63	55	72	57	98	79	91	57	77	60
7.	86	48	73	50	71	51	84	53	79	55	85	59	60	57	84	61	86	55	63	52	74	57	94	73	91	57	75	60
8.	86	44	71	56	72	58	75	55	80	53	82	63	61	56	85	65	77	61	65	50	71	58	91	76	97	57	79	59
9.	88	46	89	50	80	48	85	44	86	52	81	54	68	56	84	54	83	53	79	45	80	58	90	70	97	57	84	56
10.	85	41	86	53	80	48	88	45	94	54	72	39	79	37	72	53	73	47	87	52	89	50	75	49				

TABLE 3.—*Maximum and minimum temperatures for August, 1913. District No. 12, Columbia Valley—Continued.*

Date.	Washington.				Oregon.																					
	Tatoosh Island.		Walla Walla.		Ashland.		Baker.		Eugene.		Hermiston.		Marshfield.		Portland.		Port Orford.		Prineville.		Roseburg.		The Dalles.		Vale.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	69	52	108	72	77	58	89	50	76	58	105	47	64	55	87	62	58	53	101	53	78	57	105	60	94	49
2.....	63	52	100	72	90	54	89	59	52	102	74	68	52	87	63	60	54	94	53	95	66	100	74	98	61	
3.....	59	51	93	70	86	58	85	53	81	59	96	56	67	58	73	60	64	55	90	47	69	58	94	64	99	56
4.....	62	54	98	67	80	53	82	57	78	56	98	58	67	58	79	63	70	58	92	47	79	60	94	64	97	62
5.....	59	53	96	73	81	54	82	54	84	60	99	72	70	56	81	61	71	54	90	.....	82	61	92	73	89	57
6.....	60	53	86	67	85	51	77	49	83	50	95	67	66	49	79	61	74	55	85	.....	83	54	88	66	92	52
7.....	59	53	85	63	86	53	76	52	82	52	92	60	71	52	79	61	73	54	87	.....	84	55	92	66	87	58
8.....	59	52	82	62	85	53	73	50	81	53	92	67	72	50	74	60	73	54	83	.....	84	57	88	69	84	51
9.....	65	50	82	55	91	52	73	45	89	52	87	51	82	45	88	59	65	51	90	53	90	56	83	53		
10.....	66	52	92	59	90	65	83	44	80	51	92	55	69	52	93	64	60	50	90	56	93	57	91	47		
11.....	62	52	94	67	84	59	85	54	85	50	94	58	65	54	82	60	68	52	89	.....	84	53	96	64	91	51
12.....	58	52	80	60	79	51	71	55	74	51	85	61	69	58	70	52	70	52	82	.....	73	52	89	64	89	58
13.....	59	52	63	54	70	57	69	48	71	53	78	55	71	50	65	55	64	54	70	.....	66	54	74	60	90	54
14.....	57	52	71	53	71	44	63	46	72	57	75	54	70	47	69	53	68	52	69	.....	72	51	74	54	90	50
15.....	60	49	76	52	75	42	72	40	75	43	79	49	72	48	72	51	64	45	78	.....	77	46	79	50	89	53
16.....	58	49	82	56	78	44	72	44	78	46	82	46	72	45	75	50	65	51	80	.....	77	47	84	48	88	43
17.....	57	49	74	58	75	52	69	44	80	47	80	45	72	52	68	56	68	48	71	.....	76	56	80	60	83	45
18.....	57	50	75	53	78	39	67	37	78	42	81	45	71	41	71	54	71	49	75	.....	77	43	78	53	83	53
19.....	59	48	86	49	85	43	82	37	81	43	85	40	72	48	77	52	70	50	85	.....	83	47	84	50	92	58
20.....	61	49	91	57	95	48	82	47	87	45	91	45	89	46	86	55	79	51	92	.....	97	48	91	54	96	58
21.....	73	52	94	60	84	59	93	47	97	55	95	41	77	52	91	61	65	50	92	.....	97	60	94	53	98	60
22.....	58	51	92	69	91	57	82	59	94	57	94	55	60	51	87	62	68	51	95	.....	96	59	102	66	100	59
23.....	61	55	98	74	91	57	90	54	97	46	96	60	73	54	81	57	74	48	97	.....	90	53	97	73	102	50
24.....	63	54	94	66	92	52	88	55	89	48	98	54	74	56	82	61	65	55	97	.....	93	52	95	60	104	60
25.....	59	52	84	66	91	60	79	56	86	49	96	51	66	56	84	57	68	53	94	.....	60	83	55	68	90	59
26.....	63	54	88	69	85	55	82	58	79	53	90	57	75	45	74	59	74	54	86	52	81	53	88	64	98	63
27.....	60	50	89	60	92	50	84	50	84	53	93	54	75	46	84	59	75	55	93	43	87	52	92	56	97	55
28.....	68	55	96	65	83	67	93	53	79	64	92	51	76	56	85	66	71	56	92	50	84	67	92	59	97	56
29.....	59	53	93	70	90	58	82	57	76	63	95	54	67	57	80	65	67	57	92	36	88	66	97	67	95	57
30.....	56	51	93	69	88	57	86	54	81	59	92	59	64	55	74	56	67	55	92	49	80	60	93	60	97	55
31.....	58	51	73	54	80	50	74	50	75	49	92	57	69	44	66	52	68	53	80	39	65	61	84	58	91	54
Mns....	60.9	51.7	87.2	62.6	84.1	52.9	79.8	50.4	82.0	51.9	91.1	54.8	71.1	51.2	78.8	58.5	68.0	52.5	87.0	.....	82.6	54.7	90.2	60.7	83.1	54.7

<sup>a, b, c, etc.</sup>, indicate, respectively, 1, 2, 3, etc., days missing from the record.

§ § Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.